the stomach-contents nor an alcohol extract of it injected into animals had any toxic effect. A mixture of albumoses and salts, obtained by precipitating with alcohol, had pronounced toxic properties. These albumoses, however, could not have been absorbed, as they were not to be found in the urine of the patient. An autointoxication, therefore, could not be referred to them. The urine was twice as poisonous as normal urine; however, urine from the same patient at a time when he had no spasm was equally poisonous. It could not be determined what part of the effect was due to the urinary salts, because the ash was more toxic than the original urine. On the other hand, the virulence of a possible organic poison could not have been very great, for when injected into the portal vein only 7 per cent. more of the urine was required for a fatal effect than when it did not first go through the liver. In short, no poison was found at the time of the tetany that could be looked upon as a cause of an autointoxication.

Yellow Fever.—HAVELBERG (*Berliner klinische Wochenschrift*, Nos. 23–26, 1897) contributes the result of twenty-nine complete autopsies made at Rio Janeiro in the last two years. He has examined all the organs macroscopically and microscopically. He finds the changes usually described in the liver and spleen, but thinks none of them are characteristic of yellow fever. The very slight involvement of the spleen is very striking. There is no alteration in the relation of the red and white corpuscles. The blood contains bile before it is seen in the urine, but careful spectroscopic examination fails to show any trace of hæmoglobin in the blood-serum. A bacteriological examination of the stomach-contents revealed the presence of a bacillus that, after having once been recognized, he was able to find in every case. If 1 to 2 cm. of the stomach-contents of a patient with yellow fever is injected into a guinea-pig, the animal dies, and his blood contains a pure culture of the bacillus found in the stomach. The micro-organism in question is a very small, slender bacillus, about 1 μ long and from 0.3 to 0.5 μ wide. They grow, as a rule, singly. It is colored by all the basic aniline dyes, but not by Gram's stain. It grows upon gelatin plates as fine points in twenty-four hours. It is a facultative anaërobe, does not liquefy gelatin; 1 cm. of a bouillon culture kills guinea-pigs in twenty-four hours. The kidneys are reddened; the stomach is markedly injected, and sometimes there are small hemorrhages. The spleen is but slightly affected. Whether the animal is killed by an injection of the stomach-contents of a yellow-fever patient or the culture, the same germ is always found in the heart-blood in pure culture. The cultures are fatal to white mice. Rats are not very sensitive, and chickens are entirely immune. The filtrate from an old bouillon culture has no effect on guinea-pigs. Animals were able to take the cultures pure without injury if the mucous membranes were intact. The author has been able to protect animals from fatal doses of the germ by injections from patients with yellow fever. This, the author thinks, shows that we are dealing with the specific germ of yellow fever, and that we have a solid basis for a future serum therapy.

The Multiplicity of the Primary Lesion of Syphilis.—SACK (*Berl. klin. Wochenschr.*, 17 May, 1897) calls attention to the statement in Eichhorst's

Handbook of Special Pathology and Therapeutics, that a very characteristic point in the differential diagnosis between hard and soft chancres is that the former is "almost always" single and "very rarely" multiple. He believes that this statement is likely to mislead many, and particularly students, and reports an interesting case of his own in which there were as many as fifteen separate hard chancres on the genitalia. That multiple hard chancres are not so uncommon was shown in 1858 by Ricord, who published the statistics of Fournier and Clerc. The proportion of single to multiple hard chancres in Ricord's 456 cases of syphilis was 3 to 1; in Clerc's 267 cases, 5 to 1. The proportion in the cases of syphilis that have come under Sack's observation has been about the same as Clerc's, namely, 5 to 1. With the exception of two cases, one reported by Ricord and Fournier with nineteen, and the other by Mauriac with sixteen separate hard chancres, Sack's case presented the largest number of initial lesions yet recorded.

The patient, a man, aged twenty-two years, had had coitus eight days before he came under observation. Previous to coitus he had itching of the genitalia due to scabies, and remembered that at the time of connection he had a few small excoriations on the prepuce due to scratching. The increase of the itching and the appearance of several excoriations on the penis led the patient to consult Sack in Heidelberg. The patient, on first examination eight days after coitus, presented excoriations on the abdomen and genital region, the result of scratching. On the scrotum just to the left of the penis were two small abrasions of the skin. The dorsum of the penis and the border of the prepuce each presented two similar lesions. None of these, however, were to be differentiated from simple excoriations. There were five small abrasions at the coronal sulcus which were attributed to a balanitis.

The diagnosis at this time was that of scabies and balanitis, for which the case was treated.

In four days the scabies was cured, and all the abrasions excepting those at the coronal sulcus were healed. The patient, however, was kept under daily observation for a period of five weeks. During this time fifteen separate, typical hard chancres appeared. They made their appearance at different times, some during the third week and others as late as the sixth week after coitus. Eleven of them occurred at the seat of abrasions already mentioned. The lymphatics leading from the penis were hard and thickened, and the inguinal glands, particularly on the left side, on which most of the chancres were situated, were enlarged and presented a board-like hardness.

The interesting features presented by the case, according to Sack, are, first, the multiplicity of the initial lesions; second, the strong probability that several initial lesions may occur in syphilis from a simultaneous infection, and in addition a support to the view that an initial sore may give rise to others by autoinoculation, which is also supported by the observations of Köbner, Keyes, Pontoppidan, and others. Sack believes that the chancres developing in the sixth week after coitus probably developed from those of the third week by autoinoculation.

Lead-poisoning.—Pel (*Centralblatt für innere Medicin*, 1897, No. 23) reports three cases illustrating the difficulty of recognizing lead-poisoning when the